Finding that 50-year ocean warming led to higher North Coast grape quality met with scorn

By CAROL BENFELL
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Local grape growers are strongly disputing a federally funded study that claims ocean warming during the past 50 years has improved the quality of premium wine grapes.

"I started to read it and I started to laugh," said Rich Kunde, owner of Sonoma Grapevines, which provides vines to local growers. "I doubt if the authors have ever been in a vineyard."

The $80,000, two-year study was written by Ramakrishna Nemani, an associate professor of forestry at the University of Montana. Nemani's research was funded by the National Aeronautics and Space Administration, where Nemani also develops software for weather satellites.

Nemani and six co-authors sought to show that climate changes from 1951 to 1997 benefited the premium wine industry along the North Coast.

They found that the surface temperature of the ocean rose 3.5 degrees during the 46-year study period. During that same time, spring night temperatures rose, grapes began blossoming sooner and there were fewer days with frost.

Using wine ratings by Sotheby's, an industry publication, the study concluded that the higher temperatures had brought higher yields and higher quality in grapes and wine.

"I give full credit to all the people who make great wines in Sonoma and Napa. But starting in 1971, they enjoyed fabulous weather, which may not be true for the next 15 years," Nemani said.

But viticulturists said the study, published in the November proceedings of the International Forum on Climate Prediction, Agriculture and Development and submitted to the Journal of Climate Research, is fatally flawed.

There have been so many changes in so many areas — from selection of grape varieties to sanitation in the wineries — that temperature can't be singled out from all the other variables, grape growers said.

"His climate research may be sound, but he can't use that data to support his point about grape quality," said Carol Meredith, a professor of viticulture at the University of California, Davis, and a Napa Valley vineyard owner.

"The varieties grown in the last 50 years have shifted a lot, and there's been a big change in the way vineyards are designed and managed. It's impossible to isolate temperature as a variable," Meredith said.

She also said that using Sotheby's as a

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measure of wine quality over the past 50 years was a "fatal flaw," because the guide is based on individual tastings. The testers vary from year to year and the results are not objective.

Other viticulturists also question the study because it states warm temperatures produced higher-quality grapes. In fact, it's the opposite, they said.

"In general, the study's assumptions about the relationship of high temperature and high quality are reversed," said Christian Butzke, the cooperative extension enologist for the University of California, Davis.

"The premium growing areas are along the coast and the coastal valleys because of the cool ocean influence," Butzke said. "Look at the obvious difference between what is grown in the Central Valley and what is grown along the coast."

Authors of the study said they used grapes because they live as long as 50 years and are less fertilized, irrigated and genetically modified than other crops.

But Kunde of Sonoma Grapevines said the study's assumption that the vines are the same is wrong. The 1951 grapevines are long gone, and vineyards have been replanted at least twice since then, Kunde said.

You can't compare the time of blossoming or the quality when the grapes are entirely different, he said.

"Fifty years ago, the North Coast had zinfandel and other varieties that had a much larger cluster. Today it's cabernet, chardonnay and merlot. It's a whole different ballgame," Kunde said.

It's also difficult to imagine that higher temperatures would improve both quality and quantity, because those two characteristics don't go hand in hand, said Richard Arrowood of Arrowood Vineyards and Winery in Glen Ellen.

In fact, grape growers often thin their grapes to improve the quality, Arrowood said. "It puts more energy into less fruit and brings a higher-quality wine."

"The study makes a lot of conclusions based on suppositions that don't support his hypothesis," Arrowood said.

Despite the criticism, Nemani is steadfast in his findings.

"There's no doubt that technology has helped. But climate has also helped. When you look at average temperatures of 1 degree it seems trivial. But when you dissect it over time, in the water, over spring or summer months, you see a difference."

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